

*B<sup>3</sup> cont*

- at least one of the compounds of type (a) and (b) comprises an aliphatic group comprising an ethylenic unsaturation,  
wherein said at least one silicone copolymer with a dynamic viscosity ranging from  $1 \times 10^6$  to  $100 \times 10^6$  cP, is a cationic emulsion comprising a copolymer of polydimethylsiloxane containing  $\alpha,\omega$ -vinyl groups/polydimethylsiloxane containing  $\alpha,\omega$ -hydrogeno groups;

- (2) at least one additional silicone in the form of a polydimethylsiloxane;
- (3) at least one cationic surfactant; and
- (4) at least one alcohol.

## REMARKS

### I. Status of the Claims

Claims 1-112 are pending in this application. Claims 1 and 41 have been amended and new claims 109 to 112 have been added. Both the amendments and the additional claims are supported by the specification (see, e.g., Examples 1 and 2) and the claims as-filed (see, e.g., claims 15 and 41). Accordingly, no new matter has been added by these amendments, nor do these amendments raise new issues or necessitate the undertaking of any additional search of the art by the Office.

### II. Rejections Under 35 U.S.C. § 103(a)

The Examiner has issued the following rejections under 35 U.S.C. § 103(a):

- (A) claims 1-31, 38-67, and 94-108 as being unpatentable over Dalle *et al.* (EP 0874017) ("Dalle") in view of Dubief *et al.* (U.S. Pat. No. 5,650,383) ("Dubief '383") and Restle *et al.* (U.S. Pat. No. 6,039,936) ("Restle") (Office Action at 2-4);

(B) claim 32 as being unpatentable over the Dalle/Dubief '383/Restle combination further in view of Grollier *et al.* (U.S. Patent No. 5,063,051) (Grollier '051) (Office Action at 4);

(C) claim 33 as being unpatentable over the Dalle/Dubief '383/Restle/Grollier '051 combination further in view of Grollier *et al.* (U.S. Patent No. 4,957,732) ("Grollier '732") (Office Action at 5);

(D) claims 34-37 as being unpatentable over the Dalle/Dubief '383/Restle/Grollier '051/Grollier '732 combination further in view of Dubief *et al.* (U.S. Patent No. 6,011,126) ("Dubief '126") (Office Action at 6); and

(E) claims 68-93 as being unpatentable over the Dalle/Dubief '383/Restle/Grollier '051/Grollier '732/ Dubief '126 combination further in view of Inman (U.S. Patent No. 5,948,739) ("Inman") (Office Action at 7).

Applicants continue to respectfully traverse these rejections for at least the reasons of record and for the additional reasons set forth below. As an initial matter, Applicants note that, in order to establish a *prima facie* case of obviousness, an Examiner must meet three basic criteria. First, the Examiner must demonstrate that there would have been some suggestion or motivation, either in the cited references or in the knowledge generally available to one of ordinary skill in the art, to modify or combine references. Second, the Examiner must demonstrate that there would have been a reasonable expectation of success in making such a modification or combination. Finally, the reference or references must teach or suggest all of the claim limitations. See M.P.E.P. § 2143. In the present case, the Examiner has failed to meet any, let alone all three criteria.

According to the Examiner, "Dalle teaches silicone- in- water emulsions comprising the polysiloxanes of formula (I) and at least one surfactant among anionic, nonionic, amphoteric, and cationic surfactants." Office Action at 2. Although the Examiner admits that Dalle does not teach the additional silicone recited in claims 15-40, she asserts that Dubief '383 remedies this deficiency because it "teaches composition[s] for washing and rinsing hair, which comprise water-insoluble silicone in an aqueous medium and surfactants" and that the "polyorganosiloxanes in claims 15-31 and 38 are disclosed in col. 2, line 66 - col. 6, line 8." Office Action at 3. The Examiner further asserts that "Restle et al. teach an oil-in-water emulsion comprising a silicone surfactant and at least one cationic amphiphilic lipid that is a quaternary ammonium salt of formulas (IV) - (VII) and their constituents in the instant claims 41-67." Id.

Based on this combination of references, the Examiner has concluded that "[a]ll components are known in the art. Nothing unexpected or nonobvious is seen in combining old and well-known compounds for the same use." Office Action at 4. The Examiner supports her conclusion with the argument that it "would have been obvious to one of ordinary skill in the art at the time the invention was made" to have modified the disclosure of Dalle by adding the additional silicone disclosed in Dubief, "as motivated by the teaching therein, because of the expectation to have successfully produced hair care composition that enhances shine, softness, lightness and disentanglement of hair." Office Action at 4. For similar reasons, e.g., to impart softness, gloss, and disentanglement properties without a greasy feel or appearance, the Examiner believes that "it would have been obvious to the skilled artisan to have added" the teaching of Restle. Id.

However, the Examiner has failed to make a *prima facie* showing of obviousness for at least the following reasons:

A. No motivation to combine or modify

To establish a *prima facie* case of obviousness, the Examiner bears the burden of establishing, *inter alia*, that there exists some suggestion or motivation to modify or combine reference teachings. M.P.E.P. § 2143. Further, the teaching or suggestion to make the claimed combination must be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991). The Examiner has failed to articulate a reason why one of skill in the art would be motivated by the teachings of the Dalle/Dubief '383/Restle disclosures to modify and combine the three, resulting in the claimed invention. "[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000) (emphasis supplied).

First, Dalle provides a broad teaching about silicone emulsions ranging in viscosity and form from, for example, liquids, powders, sticks, gels, and aerosols. Dalle page 5, lines 47-57. However, the claimed invention recites a silicone emulsion having a specific viscosity range.

Second, Dubief '383 teaches the surprising effects of combining a silicone with an amphoteric polymer derived from diallyldialkylammonium and an anionic monomer. Between the two references there is no teaching that would motivate the combination of a silicone emulsion with an additional silicone and a cationic surfactant. Moreover, even if the two references were combined, the combination does not contain all claimed

elements. The most the teachings of the two references could indicate is substituting one type of silicone for another, not the incorporation of an additional silicone, as claimed.

Third, Restle does not cure these deficiencies, as it does not disclose a composition with a silicone emulsion and an additional silicone. Thus, there is no motivation to combine Dalle/Dubief '383/Restle. Indeed, there is even less motivation to combine the teachings of Restle with Dalle and Dubief '383, because Dubief '383 teaches an amphoteric polymer derived from diallyldialkylammonium and an anionic monomer, whereas Restle teaches a nanoemulsion based on non-ionic and cationic amphiphilic lipids. In other words, Dubief '383 and Restle teach away from each other, which results in an improper combination rejection. In re Laskowski, 10 U.S.P.Q. 2d 1397 (Fed. Cir. 1998). Neither Dubief '383 nor Restle contain a teaching that would provide motivation to combine silicones shown to be beneficial in combination with anionic monomers on the one hand and cationic amphiphilic lipids on the other.

The level of skill in the art cannot be relied upon to provide the suggestion to combine references. See Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308 (Fed. Cir. 1999). The Examiner has provided no suggestion or teaching from the references themselves that would motivate one to modify and combine references. For this reason alone, the rejection over the combination of Dalle/Dubief '383/Restle is improper and should be withdrawn.

B. No expectation of success

The requirement for a showing of motivation to modify demands that the Examiner point out an indication that such a modification would be desirable. "The

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mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.” In re Gordon, 733 F.2d 900, 902 (Fed. Cir. 1994). As discussed above, the Examiner has not shown that Dalle/Dubief ‘383/Restle provide any motivation for modification or combination, and certainly not the desirability to use an additional silicone as claimed. Likewise, the Examiner has not shown any reasonable expectation of success.

The present invention is directed in-part towards counteracting some of the drawbacks known in using cationic silicones and/or cationic surfactants in hair products, for example, resulting in lankness of the hairstyle, and stiffening of the hair. See Specification at pg. 1, lines 12-21. The Examiner has not shown, and cannot show, how there is an expectation of success in combining Dalle/Dubief ‘383/Restle in correcting the aforementioned problem. To start, the three references teach in different directions with respect to maintaining a cationic surfactant in developing a successful conditioning composition. For example, Dalle broadly discusses silicone emulsions with non-ionic, cationic, anionic, alkylpolysaccharides, amphoteric surfactants “and the like.” Dalle pg. 4, lines 21-22. Dubief ‘383 emphasizes the use of anionic, nonionic, amphoteric and zwitterionic surfactants. Dubief, Col. 2, lines 1-5. And as discussed above, not one of the three references discuss the desirability or possible benefits of a cationic silicone emulsion combined with an additional silicone.

The Examiner states that “[a]ll components are known in the art. Nothing unexpected or nonobvious is seen in combining old and well-known compounds for the same use.” Thus, the Examiner is attempting to apply an “obvious to try” standard to the present facts. However, not only has the “obvious to try” analysis been repeatedly

rejected by the Federal Circuit and its predecessor courts (see, e.g., Yamanouchi Pharm. Co. Ltd. v. Marsam Pharms., Inc., 231 F.3d 1339 (Fed. Cir. 2000)), but the Examiner's statement is simply inaccurate. Not one of the references cited by the Examiner, either individually or combined, suggest the success of the claimed invention.

C. The combination of references lacks all elements

The combination of Dalle/Dubief '383/Restle cited by the Examiner fails to contain all elements of the invention, because each of the cited references only discuss the need for one silicone. The present invention is a composition comprising a silicone copolymer emulsion having a specific viscosity and a cationic surfactant, which requires an additional silicone. The cited references only require and disclose compositions requiring only one silicone. Thus, even if the three references were combined, they do not result in the claimed invention: composition with a cationic silicone emulsion comprising an additional silicone and at least one cationic surfactant. Rather, the combination results in compounds comprising a silicone emulsion, wherein the emulsion may comprise the various types of silicones disclosed in the cited references.

For at least the foregoing reasons, the Examiner has failed to show that the Dalle/Dubief '383/Restle combination contains each of the claimed elements of the present invention, provide a teaching that would motivate their combination, and do not provide a reasonable expectation of success in their combination. As the Examiner has failed to satisfy her burden under 35 U.S.C. § 103, with respect to the primary combination of references, *i.e.*, Dalle/Dubief '383/Restle, Applicants respectfully submit that this combination and all other combinations with secondary references (*i.e.*, Grollier

'732, Dubief '126, and Inman) relying on Dalle/Dubief '383/Restle are improper.

Accordingly, Applicants respectfully request withdrawal of all § 103 rejections.

**III. Provisional Obviousness-Type Double Patenting Rejection**

The Examiner has provisionally rejected claims 1-14 and 41-104 under the judicially created doctrine of double-patenting as being unpatentable over claims 1-83 of co-pending Application No. 09/692,360; claims 1-95 of co-pending Application No. 09/692,155; and claims 1-16, 37-104 of co-pending Application No. 09/692,716. Applicants respectfully request that this rejection be held in abeyance until allowable subject matter is indicated. At that time, Applicants will consider whether or not it is appropriate to file a Terminal Disclaimer.

**IV. Conclusion**


In view of the foregoing amendments and remarks, Applicants respectfully request the consideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By:   
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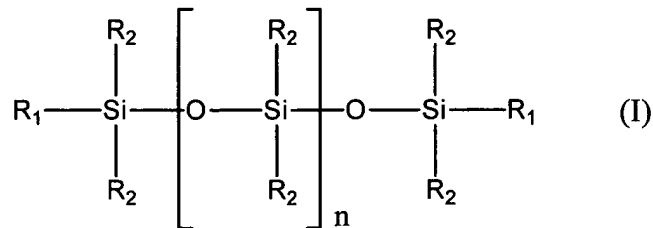
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**APPENDIX**

1. (Twice Amended) A cosmetic composition comprising, in a cosmetically acceptable medium, (1) at least one silicone copolymer with a dynamic viscosity ranging from  $1 \times 10^6$  to  $100 \times 10^6$  cP, resulting from the addition reaction, in the presence of a catalyst, of:

- (a) at least one polysiloxane of formula (I):



in which:

- $\text{R}_1$ , which may be identical or different, are independently chosen from groups that can react by chain addition reaction,
- $\text{R}_2$  in formula (I), which may be identical or different, are independently chosen from alkyl, alkenyl, cycloalkyl, aryl, hydroxyl, and alkylaryl groups, optionally comprising at least one functional group,
- $n$  is an integer wherein the polysiloxane of formula (I) has a kinematic viscosity ranging from 1 to  $1 \times 10^6$  mm<sup>2</sup>/s; and
- (b) at least one silicone compound comprising at least one and not more than

two groups capable of reacting with the groups  $\text{R}_1$  of the polysiloxane (a), wherein:

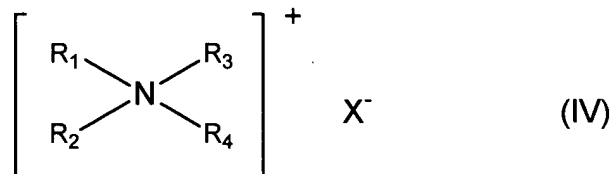
- at least one of the compounds of type (a) and (b) comprises an aliphatic group comprising an ethylenic unsaturation, [and]

(2) at least one additional silicone, and

**(3) at least one cationic surfactant.**

41. (Once amended) A composition according to claim 1 [further comprising] **wherein the** at least one cationic surfactant **is** chosen from:

A) quaternary ammonium salts of formula (IV) below:



in which:

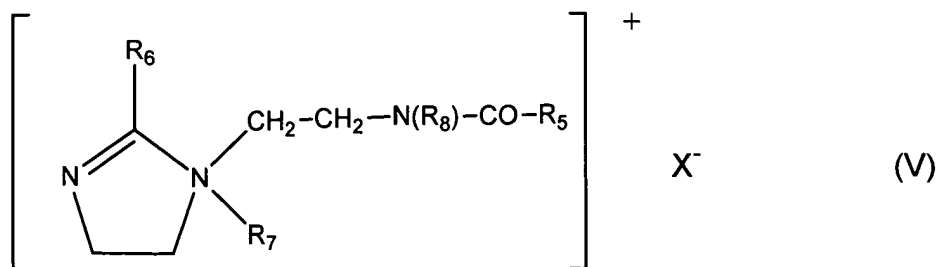
- the radicals  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_4$ , which may be identical or different, are independently chosen from linear and branched aliphatic radicals comprising from 1 to 30 carbon atoms, and aromatic radicals, wherein the aliphatic radicals optionally comprise hetero atoms, and

-  $X^-$  is an anion chosen from the group of halides, phosphates, anions derived from organic acids,  $(C_2-C_6)$ alkyl sulfates, alkyl sulfonates, and alkylaryl sulfonates;

B) quaternary ammonium salts of imidazolinium of formula (V) below:

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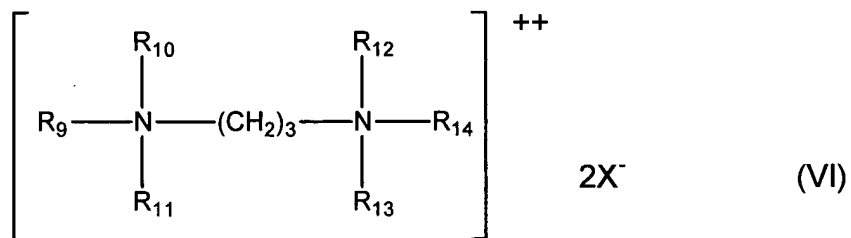
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in which:

- R<sub>5</sub> is chosen from alkenyl and alkyl radicals comprising from 8 to 30 carbon atoms,
- R<sub>6</sub> is chosen from a hydrogen atom, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, and alkenyl and alkyl radicals comprising from 8 to 30 carbon atoms,
- R<sub>7</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals,
- R<sub>8</sub> is chosen from a hydrogen atom and C<sub>1</sub>-C<sub>4</sub> alkyl radicals, and
- X<sup>-</sup> is an anion chosen from halides, phosphates, acetates, lactates, alkyl sulfates, alkyl sulfonates, and alkylaryl sulfonates;

C) diquaternary ammonium salts of formula (VI):

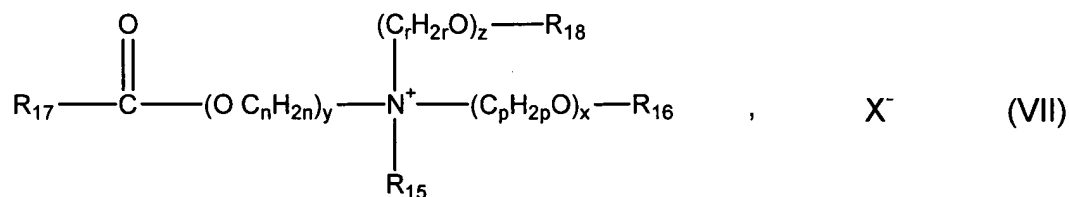


in which:

- R<sub>9</sub> is chosen from aliphatic radicals comprising from 16 to 30 carbon atoms,

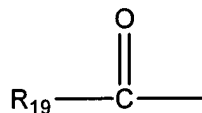
- $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$  and  $R_{14}$ , which may be identical or different, are independently chosen from a hydrogen atom and alkyl radicals comprising from 1 to 4 carbon atoms, and
- $X^-$  is an anion chosen from halides, acetates, phosphates, nitrates and methyl sulfates;

D) quaternary ammonium salts of formula (VII) below comprising at least one ester function:



in which:

- $R_{15}$  is chosen from  $C_1$ - $C_6$  alkyl radicals and  $C_1$ - $C_6$  hydroxyalkyl and  $C_1$ - $C_6$  dihydroxyalkyl radicals;
- $R_{16}$  is chosen from:
  - acyl groups of the following formula:



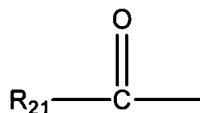
wherein  $R_{19}$  is defined below,

- linear and branched, saturated and unsaturated,  $C_1$ - $C_{22}$  hydrocarbon-based radicals, and
- a hydrogen atom;
- $R_{18}$  is chosen from:

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- acyl groups of the following formula:



wherein  $\text{R}_{21}$  is defined below,

- linear and branched, saturated and unsaturated,  $\text{C}_1\text{-C}_6$  hydrocarbon-based radicals, and
- a hydrogen atom;
- $\text{R}_{17}$ ,  $\text{R}_{19}$  and  $\text{R}_{21}$ , which may be identical or different, are independently chosen from linear and branched, saturated and unsaturated,  $\text{C}_7\text{-C}_{21}$  hydrocarbon-based radicals;
- $n$ ,  $p$  and  $r$ , which may be identical or different, are independently integers ranging from 2 to 6;
- $y$  is an integer ranging from 1 to 10;
- $x$  and  $z$ , which may be identical or different, are independently integers ranging from 0 to 10; and
- $\text{X}^-$  is chosen from simple and complex, organic and inorganic anions; and
- provided that the sum  $x + y + z$  is from 1 to 15, and that when  $x$  is 0, then  $\text{R}_{16}$  is chosen from linear and branched, saturated and unsaturated,  $\text{C}_1\text{-C}_{22}$  hydrocarbon-based radicals, and that when  $z$  is 0, then  $\text{R}_{18}$  is chosen from linear and branched, saturated and unsaturated,  $\text{C}_1\text{-C}_6$  hydrocarbon-based radicals.

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